

UC Irvine

UC Irvine Previously Published Works

Title

Asian Roboticism: Connecting Mechanized Labor to the Automation of Work

Permalink

<https://escholarship.org/uc/item/39q6z505>

Journal

Perspectives on Global Development and Technology, 19(1-2)

ISSN

1569-1497

Author

Bui, Long

Publication Date

2020-03-30

DOI

10.1163/15691497-12341544

Peer reviewed

Asian Roboticism: Connecting Mechanized Labor to the Automation of Work

Long Bui

University of California, Irvine, CA, USA

longb@uci.edu

Abstract

This article reconsiders the present-day automation of work and its transformation of who we are as humans. What has been missing from this important conversation are the social meanings surrounding Asian roboticism or how Asians have already been rendered as “robotic” subjects and labor. Through this racial gendered trope, I assess whether industrial automation will lessen, complicate, or exacerbate this modern archetype. By looking at corporate organizational practices and public media discourse, I believe that Asian roboticism will not simply vanish, but potentially continue to affect the ways such subjects are rendered as exploitable alienated robots without human rights or status.

Keywords

Asian – automation – China – Korea – machine – Philippines – robots

1 Introduction

At the dawn of a “Asian Century” we are witnessing a reorientation of global economic activity from the West towards the East. Yet the “posthuman ecologies” created by this process and their effects on the experience and representation of Asian people is not clear cut, especially within a postmillennial, global setting that operates like an integrated machine in terms of “distributed parts and patterns of circulation” (Lee 2014:30). This article seeks to probe the issue of robotics in the twenty-first century from the perspective of Asian roboticism, which I define as the way robots bear “Asian” characteristics and

vice versa. We might ask: how does the new world order alter the ways Asians are already seen as a mechanized race by the West? Such correlations draw from a “techno-Orientalist” framing of people from the East as passive, stoic cogs who merely mimic, copy, and toil relentlessly (Lowe 2014; Rhee 2015). From Chinese factory workers to well-choreographed Korean dancers, the gendered, racialized idea of Asian roboticism coheres within a global techno-culture ever more defined by Asian actors and interests.

This article assesses whether the automation of work will complicate or exacerbate the Western (mostly US) archetype of Asians as a robot-like population within late-capitalist public culture. In doing so, it addresses the following questions: what does it mean to be not simply a techno-cultural “other,” but hybrid, global machines shaped by different value systems as well as by stereotypes? It also considers how the automation of work is changing our sense of who we are as human beings from a global, Asian perspective. What has been missing from this important conversation are the social meanings surrounding Asian roboticism, or how Asians have already been already rendered as “robotic” subjects and labor. Through this, racial gendered trope, I assess whether the automation of work will lessen, complicate, or exacerbate this archetype. By looking at corporate organizational practices and public media discourse, I argue that Asian roboticism will not simply vanish, but potentially continue to affect the ways such subjects are rendered as exploitable, alienated robots without human rights or subjectivity.

2 Reconfiguring Asian Roboticism in the Asian Century

By exploring Asians as living automatons, we can make sense of the human robot as a moving global signifier that can be appropriated even by Asians. This moves beyond the observations by Artur Lozano-Méndez (2010) that techno-Orientalist images have been diversifying, and projected to societies like Taiwan, Singapore, South Korea, and China. While he focuses mostly on Japan and its development of robotics, he considers how the features of the “oriental other” in one country can be adapted in another in order to “epitomize a hyper-technified, dehumanized and materialist society” (pg. 183). This article adds to the work of Lozano-Méndez, as well as media scholars like Jane Park (2010) who is interested in the construction of “technological others” that are “racially coded Asian” (pg. 177). The article breaks the broad generalization of techno-Orientalism to be more culturally specific (techno-orientalism with Chinese characteristics), mapping the rising interdependency of superpowers like US and China. But my specific aim in this article seeks to comprehend

how Asian roboticism might work as a complicated form of difference-making across regional scales—where various technocultural forms and conditions play into new social types. This objective pays attention to the subtle codes, hidden cues, and pluralistic sensibilities emerging not under one singular Asia, but pluralistic “global Asias” (Chen 2017).

Stepping away from the universalizing abstract question of what will happen to human beings in the age of robots, we can ask what it means to be an Asian automaton in the world run by machines, and what does acting “robotic” mean in specific contexts? For example, an academic in Singapore criticized his country’s narrow focus on grades and how students are pressed into service as “learning machines,” drilled in the art of test-taking with the unblinking piety of automata: “You’re stifling someone’s ability to think for themselves. You’re like robots. You can’t think out of the box” (Vasager 2016). I argue that the conflation of Asians with robotic qualities—in personhood and in work style—persists, and this mythic quality affects the ways subjects throughout Asia are objectified as idealized machines.

In the US, East Asians have been traditionally viewed as posthuman, robot-like, mechanized beings. This American invention remains a main point of departure for scholars who work in the growing field of techno-Orientalism (Roh et al. 2015). Besides US techno-Orientalism, we can think more broadly about technoculture beyond the strict definition presented by Constance Penley and Andrew Ross who defined it as “what could be called actually existing technoculture in Western society, where the new cultural technologies have penetrated deepest, and where the environments they have created seem almost second nature to us” (Penley and Ross 1991:xii). In a time when the Western “us” has been deeply penetrated by Asian technocultural influences and products, we might focus on the myriad way cultural practices enabled by technology are not just Western or Eastern, but global in the sense that actors are simultaneously and collectively refashioning the Asian robot figure.

The human-automaton relation is complicated in Japan, which is global in its technocultural impact on the world, and also parochial due to internal social organization. Christopher Simons (2017), a North American professor based in Tokyo, argues that though we associate Japan as a leader in robots, the country lags in integrating robots into society due to a punishing corporate work culture and a population with “an intense work ethic that already ensures a supply of robotic labour—in human form.” Japan, he says, builds the future but lives in the past due to its problematic issues with sexuality, strong economic protectionism, and lack of individuality. “Japanese society is already ‘robotic’ in ways that other countries are not ... The highly structured nature

of Japanese society will make people-facing AIs easier to introduce but may have little impact on improving the lives of the once-ubiquitous ‘salaryman’” (Ibid). While trying on a telepresence robot body, Simons finds the metallic constraints of new technologies “remarkably similar to the social constraints of living in Japan, where the smooth-running social machine depends on a communal willingness to be a little artificial ourselves” (Ibid).

Despite the feeling of unicity that comes with more people traveling around the world, certain scripts endure. For example, the gaze of a travel blogger found Taiwanese people to be “empty shells with no soul or emotions, like plastic mannequins (similar to America, but even worse). Their faces are passionless and robotic, as if their soul and humanity has been squashed, suppressed, or drained out of them” (Happier Abroad 2013). Such instances of technocultural othering makes Taiwanese people into the worst kind of robots we do not want to become, despite the fact that Americans are already themselves turning into plastic automatons. This example follows Daniel Vukovich’s (2013) observation that global Orientalism has shifted from one based on a logic of cultural essentialism; to one of general equivalency reflecting the postmodern logic of global capitalism which forces recognition of Asian modernity, even if there are still feelings of European superiority to Asians.

Characterizations of Asians as perfect machines does not need to work at the level of verbal insult, as the market economy already makes global machines out of alienated labor. In 2017, the Indian government extended a ban on commercial surrogacy, reserving it only for needy Indian couples, halting a lucrative business built on abuse of the poor (Sachdev 2018). As commercial medical tourism ran rampant since its legalization in India in 2002, low-income women were recruited as surrogates churning out babies for rich couples based in Western nations. Due to colonial metaphors of the brown female body as an overly fertile machine, there arose a “rent-a-womb” market, where surrogates are deemed a “non-inventive” object of science, a reproductive technology with detachable organs, artificial uteruses, and other detachable parts within a “mechanical imagination of the body” (Atanasoski and Vora 2015:19). India’s policy was followed by bans in Nepal and Thailand, pushing the industry into Laos and Cambodia, where surrogacy brokers work with their international clientele to transform local women into “baby-making machines” (Wilson 2013). Meanwhile, the outsourcing of tech-support computer work in Hyderabad, Bangalore, and Mumbai focalizes the lifestyle of “Indian machines” huddled in back offices like cattle as part of “India’s outsourcing industry [that] thrums with potential and power, as if it were a itself a machine.”

3 China's Ascent as the Rise of the Machines

During the US-led “War on Terror,” the specter of global machines was found in the remake of the Cold War classic, the *Manchurian Candidate* (2004). This release, which occurred right after the US invasion of Iraq, demonstrates the fear of sedition and mind-control over American politicians by an unknown, Orientalized enemy state, possibly from China, the Arab world, and/or North Koreans. For the US and West, it is primarily China with its billion-plus population under communist rule that appears as the most extreme antipode to the “American way of life.” US news media often depict developing nations like China as “being populated by extraordinarily zealous and hard-working populations, as much machines as human beings, underselling and outperforming” (Birch et al. 2001:1). As the editors of *Techno-Orientalism* write, “Glossy spreads of endless rows of Chinese workers in corporate factories and towns in mainstream magazines such as *Time* and *Wired* seal the visual vocabulary of Asians as the cogs of hyperproduction. Techno-Orientalist discourse constructs Asians as mere simulacra and maintains a prevailing sense of the inhumanity of Asian labor—the very antithesis of Western liberal humanism” (Roh et al. 2015:5). They mention manufacturers in China replacing US tech companies through their ingenuity, leading a global technological revolution, building the world’s fastest supercomputer and railway, graduating the most college students and engineers, all the while producing the most scientific patents in the world. Here the rise of China can be reposed as the rise of the machines. As Betsy Huang (2008) observes, the perception of Chinese society as machinic serves a dubious purpose in terms of narrating ambivalence toward Asian progress:

To both contain the ‘horde’ and to make use of it for its own economic interests, the West constructs Chinese as instruments for national and global (i.e. Western) progress—a construction that renders them at once exploitable, containable, and inhuman. Today, the robot has been recoded as Chinese; striking photographs of rows and rows of uniformed Chinese factory workers that depict them as mechanized cogs in a mass production machine have been burnished into the Western public consciousness. These images of a technologized Chinese workforce are the latest iteration of the West’s enduring ambivalence toward ‘Orientals’ as both necessary instruments for *and* impediments to progress. (pg. 26)

China’s stimulus to the global economy demands attention to the value of Chinese mechanical labor. Racial distinctions between (mechanical) copying

and (human) creativity can be traced to the early twentieth century, when anti-Chinese racism got deployed in trade recipes in chemical and manufacturing production. The impact of Chinese “copiers” resulted in the solidification of trademark rights and an intellectual property regime poised against the fraudulent “foreign” adaptation of universal “common knowledge” (Lean 2018). The Chinese copycat that only makes foreign knockoffs ties into the broader contemporary “factory imaginary” of China that sets up a novelty vs. repetition divide, slotting different kinds of work and people within the global technocultural imaginary. As Roh et al. (2015) write, “Little work is required to translate Orientalist tropes: the invading horde of barbarians is replaced by a horde of robotic factory workers, kept at a distance by multinational corporations and shipping routes. They are uncreative, less than human, and always already mechanized” (pg. 226).

Chinese factory workers, however, must deal with the leitmotif of Asian roboticism and over-mechanization in very personal terms. As China grew into the global source of labor for manufacturing, reports about Chinese female workers treated as automata made a splash (*China Times* 2012). In 2018, a Chinese factory in Chongqing was under investigation by a Hong Kong NGO for treating students “like robots” to complete production of Apple Watches, students who were there not as voluntary workers, but unpaid “interns” learning for their vocational degrees. One student describes the experience in this manner: “We are like robots on the production lines ... We repeat the same procedure for hundreds and thousands of times every day, like a robot” (Hellard 2010). In 2012, US tech giant Apple found itself under fire for its associations with Foxconn (the world’s largest electronics manufacturer), a Taiwanese subcontractor working in southern China that produces Apple products for the US and world market. Under pressure to churn out iPads, workers were deprived of rest days and a report found women were treated “inhumanely, like machines” (Chamberlain 2011; Wee 2012). Endless toil created a spate of suicides, which were often unpremeditated, like one woman who jumped off her fourth floor of her dormitory when her mind just went blank. She became paralyzed and was confined to a wheelchair (Chan 2013). When the supervisor was asked about the spate of suicides, warranting netting beneath workers’ dormitory windows, he said blithely, “Suicides were not connected to bad working conditions. There was a copy effect. If one commits suicide, then others will follow” (Ibid). This callous statement puts workers in the category of stupid automata unconsciously following one another toward self-destruction, putting blame on them rather than the harsh working conditions and violence of organizational practices where overtime proved to be overkill. To such a charge, Zhang Shuxiang, an employee in one of those factories responds, “We’re not

machines,” verbalizing a dissent against her designation as posthuman being without a soul or feelings. Other workers concur by discussing the company’s brutal practices like a no talking policy, “What is wrong with talking with others. It helps me relieve stress. Foxconn is treating us like robots” (Wong 2010). Labor activists protested outside the company headquarters in Taipei urging executives to “respect life and to stop its inhuman and militarized treatment of workers aimed at maximizing profits ... [the workers] are treated almost like machines” (China Labor Watch 2010). As one worker recounts about her automated experience as a “spare part” within the machinery of the factory, “I am the quality evaluator. I am placed in the iron chair, tied by static lines. When the reflow delivers me the cell phone motherboards, repeatedly, I take it with two hands, and then shaking my head from right to left, moving my eye from left to right, up and down. It never ends. If I found it is deficient or anything wrong with ... *another spare part of the machine like me* will immediately run to me and ask about the reason and then regulate the line” (Lucas et al. 2013:98).

The fact that it was a US multinational company like Apple operating in conjunction with Asian subcontractors reveals how human/labor/women’s rights are assiduously rent asunder by a tech industry that treat workers as automata, and where there is no singular source of responsibility within a global network of actors. Indeed, the world’s most popular smartphone, the iPhone, is made from processing rare earth elements in Mongolia, camera lenses in Japan, and batteries and microprocessors in South Korea.¹ China is the final assembly site for the global factory. The transformation of workers into global machines continues despite a recent report found that Foxconn plans to replace all its workers with robots in order to “relieve itself of any issues stemming from its treatment of workers without having to actually improve living and working conditions or increase wages ... putting hundreds of thousands, if not millions, of people out of work” (Statt 2016). Full automation will shift the exploitation to workers in Southeast Asia, which does not have the same technological capacities or economies of scale as China. As Apple’s biggest supplier, Foxconn has been moving towards greater automation, but those remaining factory workers once treated as machines are now stuck in dead-end jobs, and learning that they are mere attendants to the incoming Foxbots (humanized by being called “harmonious men”) expected to replace eighty percent of workers (Chan 2017). Not afforded any dignity, workers are “positioned as machines, but also as cheaper

1 Aside from producing technological products for the world, China is also a repository for taking in disposed machines, since 70 percent of the world’s electronic waste is sent here to be disassembled and stripped for their parts for precious metals, a practice that poses biological hazard to the miner.

(read: less valuable) than machines" (Lucas et al. 2013:98) Says one worker, "In the production process, workers occupy the lowest position, even below the lifeless machinery. Workers come second to, and worn out by, the machines. But I am *not* a machine" (Ngai and Chan 2012:392). In this statement, industrial robots appear more privileged than humans.

Despite the cosmopolitan belief in a coming "global village," there is still a pervasive sense that certain people are not fully part of the public commons of humanity. In 2008, the year China hosted the Olympics, a British reporter attacked the "robotic" Chinese Olympic security team who were imported as torch minders, describing them like a good squad who barked orders at her on the street as protestors demonstrated against China's human rights abuses (*Dailymail* 2008). During news media coverage of 2012, Olympic Games in London, British diver Tom Daley said of Chinese rival Qui Bo that he is kind of "robot or he has been known to be like a robot." And media reporters observed Qui bearing a steely, unexpressive face even after winning consecutive gold medals and beating Daley with perfect scores (Associated Press 2012). For Daley, China's super-athlete won because he was trained by the party-state in its "Olympian Factories," forced to perform "as flawlessly as a robot on the conveyor belt from the medal machine" (Frayer 2016). When 16-year-old swimmer Ye Shiwen broke world records for 400 individual medley, she was called a robot by her competitors, a claim to which she responded at a news conference, "I am not a robot. I am a lucky girl. I don't need to practice over and over every day." The *Chinese Daily* responded with the official line: "Robots? Nope—Just Really Good Athletes" (Xiaochen 2012). Although it cautioned against accepting the theory of Chinese as stupid cogs of the state, the Italian publication *La Repubblica* nevertheless put out an article with the suggestive title, "Operation Yao Ming, Created in a Lab." Inferring that the most famous Chinese basketball player in the world is the "product of scientific breeding techniques" by a militaristic authoritarian country used to pumping out "mechanical robots, tall, cold and lifeless, adored as demi-gods" (Tarantino and Carini 2013:324). Even before China came to global prominence claims of child abuse and drug doping at the Olympic Games in Atlanta fed into "the stereotype of the Big Red Machine that turns out robotic athletes for the state" (Brownell 1997:21-22). If the Olympics celebrates the greatest achievement of human ability and the world's ability to come together in the name of competitive sports, accusations of the PRC as operating an assembly line of robotic athletics deracinates that transcendent humanistic ethos and spirit.

What happens then when Asians replicate and reproduce this sense of Asian roboticism? China is at the forefront of global, AI synthesis, producing human-looking androids like a male-appearing, robot, television anchor

for the Xinhua news agency. Such AI anchors can work 24 hours a day and receive input from texts in the system (Tao 2018). They do everything from taking orders at a restaurant to policing malls as security. Robots in the public media however appear often in a youthful female form to work for and entertain humans. Publicized with news article titles like “Bionic Woman: Chinese Humanoid Robot Turns on the Charm in Shanghai,” these robotic women are controlled by cloud technology, and assumed to bear the right “soft” personality for subservience (*The Hindu* 2017). Jia Jia, first trotted out in 2017 by a team of engineers at the University of Science and Technology of China, was conceived to perform a range of menial tasks like cleaning restaurants, vacuuming nursing homes, and washing patients in hospitals. Her creators contend she heralds a new generation of cyborg labor, perhaps freeing up grunt work so that Chinese workers do not have to do such drudgery themselves.

4 The Robotization of Global Workers

Understanding the social aspects of automation is indispensable as robots are changing every facet of the planet in what can be called the Fourth Industrial Revolution (Schwab 2017). At a superficial level we understand that technological advances like roboticization are threatening to upend human labor, swelling the problem of precarious employment across the planet to the extent so called “sewbots” possess the capacity to work faster than low-wage factory workers. From driving cars to cleaning floors, these robots accompanied by drones and computers are modifying the technology-society interface, and concomitantly intensifying income gaps and stagnation of wages. All of this has created a panic-stricken feeling around the threat of “globots,” while inciting a backlash against migrants, refugees, and Asian economies, all blamed for the West’s decline and a stunning loss of blue-collar jobs (Baldwin 2019).

Absent from all the hype about global automation is a deeper discussion of who will be most impacted by such developments. As Louis Hyman (2018) writes, most companies in the electronics industry rarely employed robots, and this still seems to be case despite prognostications of a robot revolution. “Every time someone says ‘robot,’ simply picture a woman of color. Instead of self-aware robots, workers—all women, mostly immigrants, sometimes undocumented—hunched over tables with magnifying glasses assembling parts, sometimes on a factory line and sometimes on a kitchen table.” Jill Lepore (2019) finds that in terms of the human-machine analogy “something darker is going on, mirrored in the feminizing of robots ... female workers

aren't being paid more for being human; instead, robots are selling better when they're female."

Many Internet companies rely on an invisible labor pool of overseas workers to "soak up the worst of humanity in order to protect the rest of us," says Hemanshu Nigam, chief security officer for the popular American website, Myspace (Drum 2014). Nigam estimates that there might be over 100,000 "content moderators" who are responsible for data scrubbing, making clean all the offensive material on the Internet, and social media sites such as Facebook, Instagram, YouTube, Google, and Twitter. These hidden moderators based in Manila are double the head count of Google employees, and 14 times the number of Facebook's US-based workers. Yet they are not considered full-time employees of the multinational tech companies, receiving almost no pension benefits and recognition as "real" workers (Chen 2014). Most of this digital labor is done in the Philippines since robot moderators or AI are not yet smart enough to grasp social context or moral gray areas. These workers have opened up about the trauma of spending hours on end pressing the button "ignore" or "delete," perusing through the worst acts against humanity so those living in the rest of the world can have a sanitized experience of global interconnectivity (Lekach 2008). In many ways, these global workers are made to feel like unfeeling robots paid to suppress any human emotions. In short, these invisible machines of the Global South are relied upon to absorb human pain, so the rest of us can enjoy unperturbed privileged digitized lives in the global village. This resonates with the perception of Asians as dull, listless robots in the field of domestic care and affective labor. In Israel, migrant workers from the Philippines were called "foreign robots" by those complaining against the importation of "vacant eyed" and "lifeless" workers acting like "automatons" while going through the mind-numbing protocols of caregiving (Bradley 2014:102).²

In a globally integrated economy, it is vital to assess how rich nations like South Korea utilize outsourced workers in the Philippines to envision a robotized, Asian future. Korea has been testing teaching machines in classrooms due to a lack of fluent English-language instructors, employing hundreds of robots as classroom playmates and teachers. With female workers in the Philippines "telepresent in the machines," the robots are fitted with cameras

2 This happened during a lecture series aimed at older "Anglo" (English speaking) Israelis. A social worker explained the geriatric services offered in Israel and methods for individuals to effectively engage with long-term planning, including the process for hiring a migrant caregiver.

that record the foreign teacher's face imprinted on a celluloid screen, which displays the robot teacher's animated CG face (if not live video the default image is a white woman). They can also interact with Korean students through a two-way video camera installed in a robot that can be commanded to move, sing, and dance with undulating robotic arms. These robots are part of a national project in South Korea to automate teaching, tapping into a global language-learning market dominated by English, something that draws on the English proficiency found in the Philippines, a former US colony (historical traces and whiteness thus inform the pathway of our cyborg futures). Mastering a "Filipina-tinged" American accent, the human/sender mediate global forms of education and childcare, according to Anna Guevarra (2018), that play into racialized, gendered hierarchies of skill even as it confounds the relationship between human and automaton. As Guevarra makes clear, the erasure of the "real" teacher's physical presence leads them to feel they are actually robots and identify with the robots, even while they "must balance a fine line between being humanlike yet still appearing to be a thing, an entertaining gadget" (pg. 757). As one teacher who considers herself the world's first "robot teacher" explains: "Engkey is a robot that has a human face and the body of a machine ... I felt like I was more like Engkey. I know that it was not my face they were seeing. It was an avatar. They only heard my voice" (Ibid:754).

Such disembodied, interactive exchange through the telecom bears some similarity to the workers employed through Amazon. The world's largest online retailer was accused of treating its employees within its well-packed warehouse like robots (Rittenhouse 2017). As one employee observes, "I was working as an order picker, and you're already treated as a robot ... You're clocking up idle time, you're taking time to get to the toilet. They started treating human beings as robots, essentially. If it proves cheaper to replace humans with machines, I assume they will do that. I couldn't see them being concerned with people losing their jobs" (Picchi 2018). Responding to pressures for humane labor practices and better compensation Amazon started a new business model called the Mechanical Turk. It uses non-office workers from all over the World Wide Web to fulfill on-demand temporary assignments and crowdsourcing tasks that computers cannot accurately perform, such as visually identifying objects in a photo or transcribing audio recordings. Without retirement, overtime pay, or health benefits, the independent contractors do not get the same treatment as salaried employees on payroll (Wilson 2013). When the BBC (2013) sent an undercover reporter to an Amazon warehouse the journalist wrote how he and other "pickers" that collected inventory items "are machines, we are robots ... we don't think for ourselves, maybe they don't trust us to think for ourselves as human beings, I don't know."

A third of Amazon's MTurk workers hail from India, who use it as their main source of income. Amazon pays them in rupees, an hourly wage of 30 cents. The rest of the employees come from miscellaneous countries, expressing the interwoven nature of the global homework or the gig economy. The name of Amazon's program honors an old trick of a mechanical puppet garbed in Turkish attire that played and won games of chess with human players in late-eighteenth century Europe, even though there was an actual person behind the Turk.³ It was named so because populations east of Europe were understood to be "docile" and "soulless" automatons (Aytes 2012). The Mechanical Turk's name reveals hidden power relations as its name gives reference to the parlor trick of "concealing small human beings who actually did the work purportedly done by machines" (Golumbia 2015). The ghost of the original mechanical Turk haunts today's workers who are reduced to a small stature as casualized and captive laborers. All of this is, according to Miranda Hall (2017),

part of a craze for automata designed to resemble the oriental 'Other' ... but the Muslim-as-machine takes on new meanings as workers in impoverished areas, from Syrian refugee camps to the Palestinian occupied territories, are forced to perform these repetitive, unskilled tasks, concealed behind a slick, anonymized interface. Machine-like, always-on, this 'surplus population' can always be tapped into by companies to fuel the twenty-four-hour business cycle that drives Western progress.

These states of human exception will not disappear anytime soon as the Amazonization of things coincides with the datafication of people.

Amazon's Mechanical Turk workers exist almost in synergetic fashion to smart-home, robotic assistants, forming a "surrogate humanity" found in the novel frontiers between human and machine" (Atanasoski and Vora 2015). In the light of the Internet of Things (IoT) and the production of intelligent machines performing the labor performed traditionally by devalued racial/gender classes, we can discern a new sliding scale of humanity within a period of innovation that has witnessed a range of emergent new technologies like nanotechnology, unmanned aerial attack drones, 3-D printers, and artificial hearts and organs. In this brave new world people are not mere substitutes for technology or technology themselves. Here a new cognitive map is drawn

3 The naming of the program is inspired by the Turk, a chess-playing Orientalized automaton invented in 1770 that successfully played against smart humans like Benjamin Franklin for close to a century. The Turk turned out to be an elaborate hoax as there was a chess master pulling strings to operate the machine.

“out of which emerges the ‘smart infrastructure’ of the human-thing network” (Ibid). Asian robots exist as an object of difference within global technoculture in a world where “nonwhite work may be performed interchangeably under the sign of automaton, either by dark-skinned servants to technology, or, subsequently, by fleshless technological servants” (Kevorkian 2006:88).

5 Conclusion

The technocultural myth that fully sentient robots will someday be our overlords or slaves fails to recognize the historical forms of Asian robot formation. Machineness is becoming more “Asianized” and global at the same time. This has implications for understanding the global popular culture and technoculture. The global rise of machines forecasts a historic shift in the balance for mankind that parallels machine-like Asian societies coming to power by disempowering Asian workers.

The ideation of Asians as robotic subjects/objects evolves in order to reflect the reconfiguration of marginalized and mechanized populations. Asian roboticism tells us of the making of technocultural subjects and objects within public phenomena, challenging scholars across the humanities and social sciences to think about how power/difference manifests in localized events around the world. Such an interdisciplinary project contributes to organizational studies, sociology of race/gender, cultural anthropology, and global political economy. The question of who can be human and who are posthuman robots is evolving in an era of global machines, when novel technologies and capitalist processes muddle the line between East and West, the self and the other, man and machine. Ensclosed within Asian roboticism are ways in which human machines are exploited, and demonstrates against the belief that the rise of robots will end contending issues of race, gender, class, and sexuality.

References

- Associated Press. 2012. “Daley: Chinese Diver Qiu is ‘like a Robot.’” *Associated Press*. July 21.
- Atanasoski, Neda and Kalindi Vora. 2015. “Surrogate Humanity: Posthuman networks and the (Racialized) Obsolescence of Labor.” *Catalyst: Feminism, Theory, Technoscience* 1(1):1-49.

- Aytes, Ayhan. 2012. "Return of the Crowds: Mechanical Turk and Neoliberal States of Exception." Pp. 87-105 in *Digital Labor: The Internet as Playground and Factory*. Edited by Trebor Sholz. London: Routledge.
- Baldwin, Richard. 2019. *The Globotics Upheaval: Globalization, Robotics, and the Future of Work*. UK: Oxford University Press.
- BBC. 2013. "Amazon Workers Face 'Increased Risk of Mental Illness.'" *BBC*. November 25.
- Birch, David, Tony Schirato, and Sanjay Srivastava. 2001. *Asia: Cultural Politics in the Global Age*. NY: Palgrave.
- Bradley, Laurel. 2014. *Health, Well-Being, and Rights: Mapping the Boundaries of Belonging for Filipino Caregivers in Israel*. PhD dissertation. University of North Carolina at Chapel Hill.
- Brownell, Susan. 1997. "'China Bashing' at the Olympic Games: Why the Cold War continues in Sports Journalism." *Chinese American Forum* 7(3):21-22.
- Chamberlain, Gethin. 2011. "Apple's Chinese workers treated 'Inhumanely, like Machines.'" *The Guardian*. April 30. (<https://www.theguardian.com/technology/2011/apr/30/apple-chinese-workers-treated-inhumanely>).
- Chan, Jenny. 2013. "A Suicide Survivor: The Life of a Chinese Worker." *New Technology, Work and Employment* 28(3): 84-99.
- Chan, Jenny. 2017. "Robots, Not Humans: Official Policy in China." *New Internationalist*. November 1. (<https://newint.org/features/2017/11/01/industrial-robots-china>).
- Chen, Adrian. 2014. "The Laborers Who Keep Dick Pics and Beheadings Out of Your Facebook Feed." *Wired*. October 23. (<https://www.wired.com/2014/10/content-moderation/>).
- Chen, Tina. 2017. "Context, Coordinate, Circulation: the Postrepresentational Cartographies of Global Asias." *Verge: Studies in Global Asias* 3(1):vi-xiv.
- China Labor Watch. 2010. "DailyFinance: Apple, HP, and Sony Open Probes into Latest Foxconn Suicides." May 28. (<http://www.chinalaborwatch.org/newscast/31>).
- China Times. 2012. "Foxconn Chairman Likens His Workforce to Animals." *China Times*. January 19. (<https://web.archive.org/web/20120215091833/http://www.wantchina-times.com/news-subclass-cnt.aspx?id%3D2012011900011%26cid%3D1102%26MainCatID%3D0>).
- Daily Mail. 2008. "Olympic Farce: Former Blue Peter Presenter Konnie Huq Lashes out at 'Robotic' Chinese Torchminders." *Daily Mail*, April 7. (<https://www.dailymail.co.uk/news/article-557886/Olympic-farce-Former-Blue-Peter-presenter-Konnie-Huq-lashes-robotic-Chinese-torch-minders.html>).
- Drum, Kevin. 2014. "Social Networking Employs More People Than We Think." *Mother Jones*, October 26. (<https://www.motherjones.com/kevin-drum/2014/10/social-networking-employs-more-people-we-think/>).

- Frayer, Janis Mackey. 2016. "Rio 2016: China's Olympian Factories Churn Out Fewer Champions." *NBC News*. August 20. (<https://www.nbcnews.com/storyline/2016-rio-summer-olympics/rio-2016-china-s-olympian-factories-churn-out-fewer-champions-n630786>).
- Golumbia, David. 2015. "The Amazonization of Everything." *Jacobin*. August 5. (<https://www.jacobinmag.com/2015/08/amazon-google-facebook-privacy-bezos/>).
- Guevarra, Anna Romina. 2018. "Mediations of Care: Brokering Labour in the Age of Robotics." *Pacific Affairs* 91(4):739-758.
- Hall, Miranda. 2017. "The Ghost of the Mechanical Turk." *Jacobin*. February 16. (<https://www.jacobinmag.com/2017/12/middle-east-digital-labor-microwork-gaza-refugees-amazon>).
- Happier Abroad Blog. 2013. "Taiwanese people are empty shells with no soul, personality or passion." HappierAbroad.com. (<http://blog.happierabroad.com/2013/01/taiwanese-people-are-empty-shells-with.html>).
- Hellard, Bobby. 2010. "Apple to Investigate Factory Treating Students 'like Robots.'" *IT Pro*. October 30. (<https://www.itpro.co.uk/business-strategy/careers-training/32246/apple-investigates-student-labour-robot-claim-china>).
- Hindu, The. 2017. "Eerily Life-Like, Chinese Bionic Woman Turns on the Charm." *The Hindu*. January 9. (<https://www.thehindu.com/sci-tech/science/Eerily-life-like-Chinese-bionic-woman-turns-on-the-charm/article17013635.ece>).
- Huang, Betsy. 2008. "Premodern Orientalist Science Fictions." *Melus* 33(4):23-43.
- Hyman, Louis. 2018. *Temp: How American Work, American Business, and the American Dream Became Temporary*. NY: Penguin.
- Kevorkian, Martin. 2006. *Color Monitors: The Black Face of Technology in America*. NY: Cornell University Press.
- Lean, Eugenia. 2018. "Making the Chinese Copycat: Trademarks and Recipes in Early Twentieth-Century Global Science and Capitalism." *Osiris* 33(1):271-93.
- Lee, Rachel. 2014. *The Exquisite Corpse of Asian America: Biopolitics, Biosociality, and Posthuman Ecologies*. NY: NYU Press.
- Lekach, Sasha. 2008. "'The Cleaners' Shows the Terrors Human Content Moderators Face at Work." *Mashable*. November 12. (<https://mashable.com/article/the-cleaners-content-moderators-facebook-twitter-google/>).
- Lepore, Jill. 2019. "Are Robots Competing for Your Job." *The New Yorker*. February 25. (<https://www.newyorker.com/magazine/2019/03/04/are-robots-competing-for-your-job>).
- Lowe, Annie. 2014. *Narratives of Technological Globalization and Outsourced Call Centers in India: Droids, Mimic Machines, Automatons, and Bad 'Borgs*. PhD Dissertation. University of Kansas.
- Lozano-Méndez, Artur. 2010. "Techno-Orientalism in East Asian Contexts: Reiteration, Diversification, Adaptation." Pp. 185-210 in *Counterpoints: Edward Said's Legacy*.

- Edited by May Telmissany and Stephanie Tara Schwartz. UK: Cambridge Scholars Publishing.
- Lucas, Kristen, Dongjing Kang, and Zhou Li. 2013. "Workplace Dignity in a Total Institution: Examining the Experiences of Foxconn's Migrant Workforce." *Journal of Business Ethics* 114(1):91-106.
- Ngai, Pun and Jenny Chan. 2012. "Global Capital, the State, and Chinese Works: The Foxconn Experience." *Modern China* 38(4): 383-410.
- Park, Jane Chi Hyun. 2010. *Yellow Future: Oriental Style in Hollywood Cinema*. MN: University of Minnesota Press.
- Penley, Constance and Andrew Ross (Eds). 1991. *Technoculture*. MN: University of Minnesota Press.
- Picchi, Aimee. 2018. "Inside an Amazon Warehouse: 'Treating Human Beings as Robots.'" CBS News. April 29. (<https://www.cbsnews.com/news/inside-an-amazon-warehouse-treating-human-beings-as-robots/>).
- Rhee, Margaret. 2015. "Racial Recalibration." *Asian Diasporic Visual Cultures and the Americas* 1(3):285-309.
- Rittenhouse, Lindsay. 2017. "Amazon Warehouse Employees' Message to Jeff Bezos—We Are Not Robots." *The Street*. September 28. (<https://www.thestreet.com/story/14312539/1/amazon-warehouse-employees-discuss-grueling-work.html>).
- Roh, David, Betsy Huang, and Greta A. Niu (Eds). 2015. *Techno-Orientalism: Imagining Asia in Speculative Fiction, History, and Media*. New Brunswick: Rutgers University Press.
- Sachdev, Chhavi. 2018. "Once the go-to place for surrogacy, India tightens control over its baby industry." PRI. (<https://www.pri.org/stories/2018-07-04/once-go-place-surrogacy-india-tightens-control-over-its-baby-industry>).
- Schwab, Klaus. 2017. *The Fourth Industrial Revolution*. Redfern: Currency Press.
- Simons, Christopher. 2017. "Japan: building the future, living in the past?" *New Internationalist*. (<https://newint.org/features/2017/11/01/robots-japan>).
- Statt, Nick. 2016. "iPhone Manufacturer Foxconn plans to Replace almost Every Human Worker with Robots." *The Verge*. December 30. (<https://www.theverge.com/2016/12/30/14128870/foxconn-robots-automation-apple-iphone-china-manufacturing>).
- Tao, Li. 2018. "Xinhua News Agency Debuts AI anchors in Partnership with Search Engine Sogou." *South China Morning Post*. November 8. (<https://www.scmp.com/tech/innovation/article/2172235/xinhua-news-agency-debuts-ai-anchors-partnership-search-engine-sogou>).
- Tarantino, Matteo and Stefania Carini. 2013. "The Good, the Fake and the Cyborg: The Broadcast and Coverage of Beijing 2008 Olympics in Italy." Pp. 291-312 in *Encoding the Olympics: the Beijing Olympic Games and the Communication Impact Worldwide*. Edited by Luo Qing and Giuseppe Richeri. UK: Routledge.

- Vasager, Jeevan. 2016. "Why Singapore Kids are so Good at Maths." *Financial Times*. July 22. (<https://www.ft.com/content/2e4c61f2-4ec8-11e6-8172-e39ecd3b86fc>).
- Vukovich, Daniel. 2013. *China and Orientalism: Western Knowledge Production and the PRC (Postcolonial Politics)*. NY: Routledge.
- Wee, Sui-Lee. 2012. "Young Workers in China: 'We're Human, Not Machines.'" *The Fiscal Times*. May 4. (<https://www.thefiscaltimes.com/Articles/2012/05/04/Young-Workers-in-China-Were-Human-Not-Machines>).
- Wilson, Jeremy. 2013. "My Gruelling Day as an Amazon Mechanical Turk." *The Kernel*. August 28. (<https://kernelmag.dailydot.com/features/report/4732/my-gruelling-day-as-an-amazon-mechanical-turk/>).
- Wong, Staphany. 2010. "Decoding the New Generation of Chinese Migrant Workers." *EU-China Civil Society Forum*. September 2. (https://www.eu-china.net/uploads/tx_news/eu-china_2010_hintergrund_01.pdf).
- Xiaochen, Sun. 2012. "Robots? Nope—Just Really Good Athletes." *China Daily*. July 30. (http://www.chinadaily.com.cn/cndy/2012-07/30/content_15629012.htm).